

# Bouncing Balls Worksheet

Physics –Mr. Richter

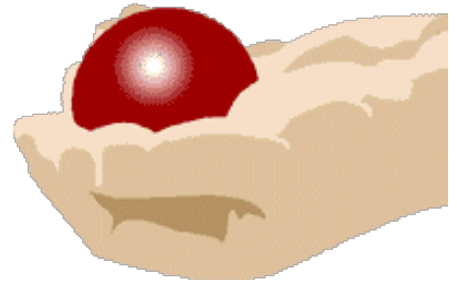
Name: \_\_\_\_\_

1. Explain how the potential and kinetic energy of a falling object changes.
2. How is potential energy changed into kinetic energy?
3. What is meant by the conservation of energy?
4. Is all the energy in a system conserved? Explain in detail
5. Explain where the kinetic energy converted from potential energy goes when a ball hits the ground.
6. Provide an example of kinetic energy changed into heat.
7. How does the law of conservation apply to cars?

8. A ball having a weight of 2.5kg is dropped from height of 4 meters.

a. What is the potential energy of the ball just before being dropped?

b. What is the kinetic energy just before hitting the ground?



9. What ball used in our experiment had the most PE? Which had the most KE?

10. Describe the relationship between drop height and KE?

11. Was the relationship above the same for all the balls dropped?

12. Which ball had the greatest mass? Describe the relationship between GPE and mass.

13. Two identical balls with the same mass are released from the same height. Ball 1 is thrown downward with an initial velocity while ball 2 is dropped from rest.

a. Apply the concept of gravitational potential energy to explain your answer.